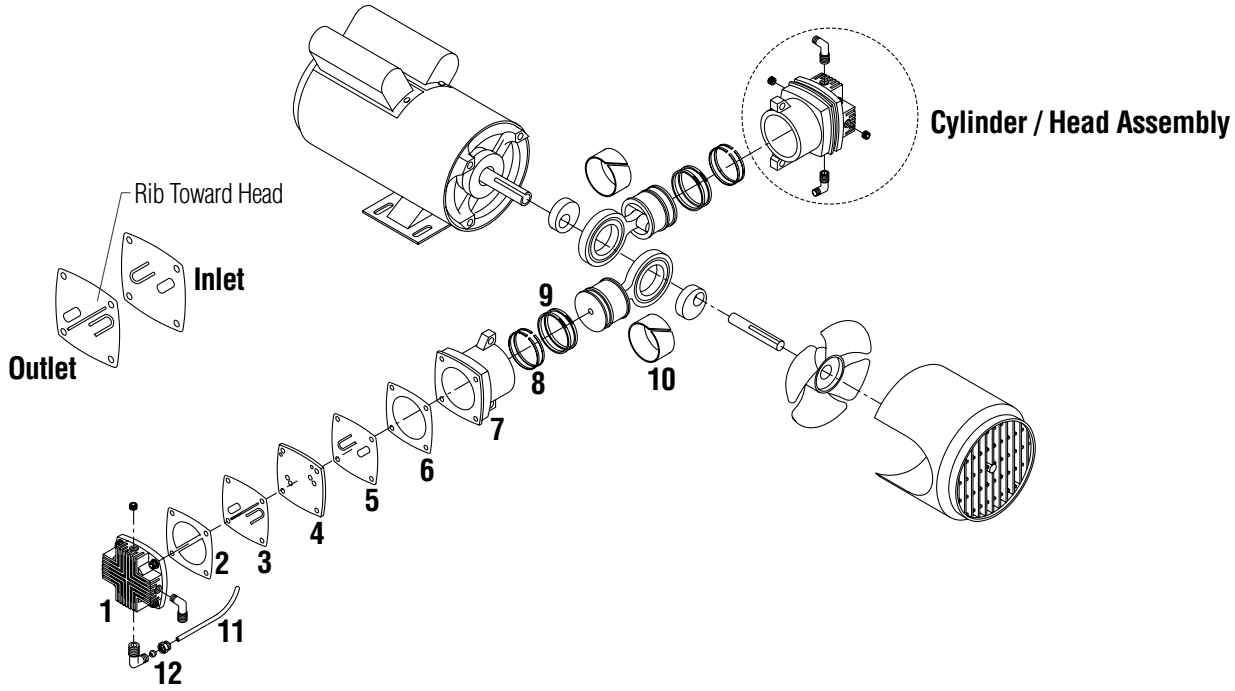
# Installation Instructions

## Piston Ring Kit

### Part #HGA85402




**Description:**

The Apollo Dental Products Piston Ring Kit contains the parts necessary to replace the piston rings along with the head gaskets. Indications of worn rings are, extended pump up times and/or increased cycling.

| Ref. # | Description | Ref. # | Description |
|---|---|---|---|
| 1 | Cylinder Head | 7 | Cylinder |
| 2 | Head Gasket | 8 | Compression Ring |
| 3 | Outlet Valve | 9 | Expander Ring |
| 4 | Valve Plate | 10 | Rider Ring |
| 5 | Inlet Valve | 11 | Discharge Tube |
| 6 | Cylinder Gasket | 12 | Discharge Sleeve |

**Installation:**

1. Turn power **OFF** to compressor at main breaker.
2. Disconnect copper discharge tubing and/or flex line from cylinder head.
3. Remove the fan shroud to access cylinder bolts.
4. Remove the four (4) "Allen" head cap screws from the cylinder head.
   *Inspect valve plates for cracked or broken valves. Replace if needed.
   **Important: Mark direction on head, position in regards to cyclinder for ease of assembly.
5. Remove valve components including gaskets and be sure to note the order. Be sure not to damage gasket surfaces, repair if needed.
6. Remove the two (2) bolts securing the cylinder and remove the cylinder. Inspect cylinder for wear. If walls of cylinder are worn, replace.

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AMI60765 Rev. 8/01

## Installation (Continued):

7. Remove the old piston seals, piston rings, and rider ring from the piston.

8. Install new piston seals, piston rings, and rider ring, being careful to locate ring gaps opposite each other.

9. Re-attach cylinder and tighten screws hand tight.

10. Move piston to **Top Dead Center** and while using a straight edge, adjust cylinder flush with top of piston and torque cylinder bolts to 150-160 inch pounds.

11. Re-torque a second time.

12. Replace the fan shroud.
    Note: Use a drop of Loc-Tite or any retaining material.

13. Place the four head bolts into the head and assemble the valve components to it using the bolts as guide posts

14. The head gasket goes against the head followed by the outlet valve, valve plate, inlet valve, and finally the cylinder gasket **(Do not use gasket adhesive)**. Align mark from step 4.

    **Important:** It's important to orient the valves and the valve plate correctly. Notice that the outlet valve has five (5) holes around the edge, (4 large and 1 small diameter) and that the inlet valve has six (6) holes (4 large and 2 small diameter). Also note the reed location of outlet valve relative to the inlet valve. Finally, the exhaust ports in the cylinder head have been marked by omitting the ends of two of the fins.

15. Place the head assembly on the cylinder and tighten the head bolts.

16. Torque all head bolts to 110-120 inch pounds. Re-torque again.

17. Re-connect copper discharge tubing and/or flex line to cylinder head.

18. Connect power to the compressor.

    *** After start-up, if compressor shows evidence of overheating or excessive noise, stop compressor immediately and double check assembly. If it cannot be resolved, contact Apollo Dental Products Technical Support at 800/233-4151.**

## Warranty Information: 90 Days

All ADP accessories are thoroughly inspected and tested in accordance with rigid specifications and standards. Our accessories are guaranteed against any defective material and workmanship from the date of shipment; provided that the installation, operation, and maintenance is done in accordance with ADP procedures as outlined in our Installation and Maintenance Guides. Warranty cards must be returned to ADP within ten days of installation to effect warranty. No other warranties or guarantees, expressed or implied are made.

ADP's obligation under the warranty is to provide parts for the repair or, at its option, to provide the replacement product (excluding labor). All special, incidental and/or consequential damages are excluded. We will not issue credit for accessories without first attempting to correct the problem in the field. Written notice of breach of warranty must be given to ADP within the warranty period. The warranty does not cove damage resulting form improper installation or maintenance, accident or misuse. The warranty does not cover damage resulting from the use of cleaning, disinfecting or sterilizing chemicals and processes. The warranty does not cover vacuum failures due to hard water deposits. Failure to follow instructions provided in ADP's Installation and Maintenance Guides may void the warranty.